is, having implemented medium term solutions, LECs will almost certainly argue that there is no need to deploy long term solutions.

As explained above, however, most of the investment in network upgrades for medium term solutions is transferrable to longer term solutions. Indeed, if carriers are given the freedom to choose their own numbering and triggering solutions, they should be able to plan their investments to minimize waste. The transition to longer term solutions, therefore, will require a relatively small investment from LECs, and they should not be able to overstate the burden and cost of upgrading their networks when necessary.

The Commission must ensure that LECs are not able to resist this progress from medium to long term solutions. When appropriate, it should establish a baseline definition for long term solutions similar to the one suggested for medium term solutions above. For example, long term solutions should be required to pool numbers so that numbering resources are used more efficiently in the longer term. Thus, the Commission should require that all vacant numbers (i.e. those unused by any service provider) should be pooled in the service management system and be usable by any provider. A CLEC should be able to obtain a new number from the pool of all unused dialable numbers in the applicable local calling area.

The Commission should also delegate to an industry committee the responsibility for determining the national standards

required for long term solutions and for seeking approval from standard setting bodies. The progress of such industry bodies should be monitored closely to prevent incumbents from delaying the process. Finally, as mentioned above, the Commission should link LEC cooperation with pricing flexibility and, if possible, with entry into the long distance market.

E. The Commission Should Establish Regulations For The Recovery Of The Costs Associated With Number Portability.

1. LECs Should Be Required To Provide RCF And DID Free Of Charge.

Although sometimes necessary in the short term, non-database approaches place CLECs at a competitive disadvantage, as explained above. To compensate for the disadvantages of relying on these approaches and to provide at least some incentive for LECs to implement database solutions,[24] the Commission should require LECs to provide the CLECs' choice of RCF, DID or enhanced DID free of charge.

There is ample precedent for requiring free provision of non-database solutions. The most compelling example is the Commission's Access Charges proceeding,[25] in which the Commission determined that the quality of local access granted to AT&T

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[24] Requiring the provision of RCF and DID without charge might to some extent compensate for competitive imbalances, but it creates only a minimal incentive for LEC implementation of true number portability. The problem is that while LECs may in some cases charge new entrants steep prices for RCF and DID, they incur very low incremental costs to provide them.

[25] See MTS and WATS Market Structure, Third Report and Order, 93 F.C.C.2d 241 (Feb. 28, 1983) on reconsideration 97 F.C.C.2d 682 (Aug. 22, 1983), 97 F.C.C.2d 834 (Feb. 15, 1984).

before implementation of full equal access was superior to that available to other long distance carriers, the so-called "other common carriers" ("OCCs").[26] To compensate the OCCs for this competitive disadvantage, the Commission imposed a nationwide "premium access charge" on AT&T to subsidize the OCCs' interconnection charge until the transition to full equal access was complete.[27]

Here, as in the equal access context, LECs possess a significant competitive advantage due solely to their historical role as certified monopoly providers. Just as AT&T was required to pay a premium for the competitive advantage gained before implementation of full equal access, so LECs should be required to pay a premium for the competitive advantage gained before implementation of true service provider portability. In this latter case, the "premium" should be in the form of provision of RCF without charge.

2. Carriers Should Absorb The Costs They Incur In Implementing Number Portability; Common Costs Should Be Split Equitably.

As recognized in the NPRM,[28] it is important that the Commission establish equitable regulations for the allocation of the costs of database solutions. In considering these equities, it is critical to recognize that both LECs and CLECs incur costs

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[26] See id. at 287-290.

[27] See id. at 287-288. The Commission stated that the premium access charge would decline during the conversion to full equal access. Id.

[28] See Number Portability NPRM at ¶¶ 53-54.

in altering their networks to accommodate service provider portability. The fairest and most efficient approach to cost recovery is therefore for each carrier to absorb its own number portability costs.

Moreover, carriers should assume common costs, such as those associated with the administration and maintenance of databases, in proportion to their relative market shares. Market share should be measured by the number of subscriber lines.

LECs will object that this approach to cost recovery leaves them paying a larger amount than CLECs. This objection should be viewed with skepticism since number portability is not in the LECs' interest, and they will certainly try to undermine its implementation by forcing higher entry costs on their competitors. Moreover, it should be emphasized that any difference in the LECs' cost recovery obligations is far outweighed by the huge competitive advantages enjoyed by LECs over CLECs that are purely the result of their historical role as certified monopoly providers.

IV. State Regulators Should Play A Significant Role In The Implementation Of Service Provider Portability.

As the Commission recognized in the NPRM,[29] states have a legitimate interest in the development of number portability and have already started conducting tests and implementing number portability measures. Moreover, states can play an important

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[29] See id. at ¶ 32.

role in overseeing the transition to medium term solutions and finally to long term solutions.

First, the Commission should encourage states to continue to conduct and/or oversee portability trials. TWComm has actively participated in state trial efforts, and has included as Appendix C a detailed description of the trials. State portability tests provide an invaluable opportunity to study the database technologies.

There are very likely other aspects of the regulation of number portability implementation that are efficiently left to the states. Indeed, again, the FCC's participation in service provider portability should be limited to requiring only what is necessary for adequate nationwide service provider portability and to intervening when those requirements are not being met. Subject to federally established rules, the states could provide important administration and enforcement functions which the FCC's limited resources cannot.

Moreover, as mentioned above, the baseline requirements for any medium term database solution should not be exhaustive. So long as it does not undermine the federal policy goals in this area, an individual state should be permitted to require LECs to provide CLECs with further portability services.

V. It Is Well Within The Commission's Jurisdiction To Establish A Framework For The National Implementation Of Service Provider Portability.

Parties opposing the introduction of competition in the local loop will almost certainly try to argue that the FCC lacks

the jurisdiction to implement number portability regulations. But as explained below, properly fashioned regulations for the promotion of number portability would fall well within the Commission's jurisdiction.

Section 1 of the Communications Act grants the FCC expansive jurisdiction over interstate communications.[30] The scope of that grant is only limited by Section 2(b) of the Act which grants the states jurisdiction over certain intrastate carrier communications activities.[31] The Courts have interpreted these provisions to mean that, when otherwise acting within its authority, the Commission may preempt state regulation where it is "not possible to separate the interstate and intrastate components of the asserted FCC regulation."[32]

As acknowledged in the NPRM, number portability will have a substantial effect on the administration of the nation's numbering resources and the promotion of competition between

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[30] See 47 U.S.C. § 151 (granting the FCC jurisdiction "[f]or the purposes of regulating interstate and foreign commerce in communication by wire and radio so as to make available, as far as possible, to all the people of the United States a rapid, efficient, nationwide and worldwide wire and radio communication service . . .").

[31] See 47 U.S.C. § 152(b) ("nothing in this chapter shall be construed to apply or to give the Commission jurisdiction with respect to (1) charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communication service by wire or radio of any carrier . . .")

[32] Louisiana Pub. Serv. Comm'n v. FCC, 476 U.S. 355, 375 n.4 (1986) citing North Carolina Utils. Comm'n v FCC, 537 F.2d 787 (4th Cir.) cert. denied, 429 U.S. 1027 (1976) and North Carolina Utils. Comm'n v FCC, 552 F.2d 1036 (4th Cir.) cert. denied, 434 U.S. 874 (1977).

providers of interstate communications.[33] In establishing regulations mandating the development of number portability the Commission would therefore be acting well within its authority under Section 1 to promote an efficient and rapid interstate telecommunications network.[34]

It should be noted that, in certain cases, it may prove impossible to separate the interstate and intrastate components of the number portability regulations. For example, it would be impossible to separate the interstate and intrastate components of regulations mandating a national N-1 call processing scenario. If states were permitted to mandate TAP or OSP processing scenarios for intrastate calls, the national aspect of the approach and all its concomitant efficiencies would be lost. In that case, therefore, as well as perhaps others, the Commission may have to preempt state regulation of number portability. A complete analysis of this issue, however, awaits a clearer sense of exactly what regulations the Commission intends to implement.

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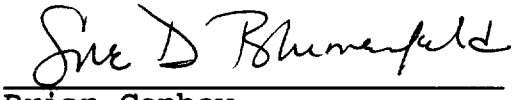
[33] See Number Portability NPRM at ¶¶ 29-31.

[34] See 47 U.S.C. § 151.

CONCLUSION

For the reasons described above, TWComm respectfully requests that the Commission mandate the development of service provider portability in the manner described in these comments.

Respectfully submitted,



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September 12, 1995

ANDREWS OFFICE PRODUCTS CAPITOL HEIGHTS, MD (K)

APPENDIX A

TIME WARNER COMMUNICATIONS

MARKET RESEARCH AND CONCLUSIONS ON THE IMPACT OF NUMBER PORTABILITY

TIME WARNER COMMUNICATIONS

MARKET RESEARCH AND CONCLUSIONS ON THE IMPACT OF NUMBER PORTABILITY

PURPOSE;

The purpose of this report is to threefold:(a) document the fact that lack of number portability poses a significant barrier to Time Warner Communications' entry in the local telephone service market, (b) quantify the estimated negative impact due to lack of number portability, and (c) summarize the research efforts that led to these conclusions

BACKGROUND

Time Warner Communications plans to provide telephony based communications services in selected Time Warner Cable cities. Before undertaking this endeavor, Time Warner Communications wanted to understand market potential and issues likely to impact market entry. Towards this objective, Time Warner Communications undertook research designed to identify consumers' likelihood to switch to a competing telephony based service provider with and without number portability, given various pricing scenarios and brand positioning options.

METHODOLOGY

A. Telephone interviews were used to gather consumer feedback in three cities. The sample was drawn from random lists of all households in each city's cable franchise area; participants totaled 2,400.

B. Over 14 focus groups in 5 cities were conducted to understand customer perceptions of the ideal telephone company, various brand options, and the issue of number portability as a factor in influencing consumers' decisions to switch providers. These groups included residential, small , medium, and large business customers.

CONCLUSIONS (A) QUANTITATIVE RESEARCH THROUGH CONSUMER INTERVIEWS

A lack of number portability will be a considerable barrier to maximizing share for a new local telephone service offering, regardless of where it is offered or how it is positioned. A discount of 10% or more may be required to offset this situation. Although the negative impact due to a lack of number portability can be overcome with good service quality and reasonable pricing, issues such as having to notify people of a number change and concerns about getting a new number in published directories impact consumers' willingness to switch providers and must be addressed.

CONCLUSIONS (B) QUALITATIVE RESEARCH THROUGH CUSTOMER FOCUS GROUPS

SUMMARY

A lack of number portability was the most passionately discussed topic in all of the focus groups. Residential and business respondents clearly perceive many negatives and few if any positives associated with this issue. While residential respondents used terms like "hassle" and "inconvenient" to describe how this would impact them, business respondents used even stronger terms like "very negative" and "kiss of death".

RESIDENTIAL PERSPECTIVE

✓ *A lack of number portability is perceived as a problem for most consumers, requiring some significant form of incentive to make up for the inconvenience (e.g free features, price discounts, etc)*

✓ *Several respondents mentioned the expenses a lack of number portability would cause them, in the form of reprinting material such as letterhead, business cards for work-at-home customers, mailing lists, etc, and the effort than would be required to notify customers of the number change*

✓ *A few residential respondents did not have a problem with lack of number portability; these respondents tend not to be heavy home phone users*

✓ *A few respondents stated that they would never switch to a different provider of telephone services, if this required a number change, regardless of any incentive offered*

CONCLUSIONS (B) QUALITATIVE RESEARCH THROUGH CUSTOMER FOCUS GROUPS

BUSINESS PERSPECTIVE

✓ *Almost all business respondents perceive a lack of number portability as a serious barrier that will be difficult to overcome, even with call forwarding or messaging options*

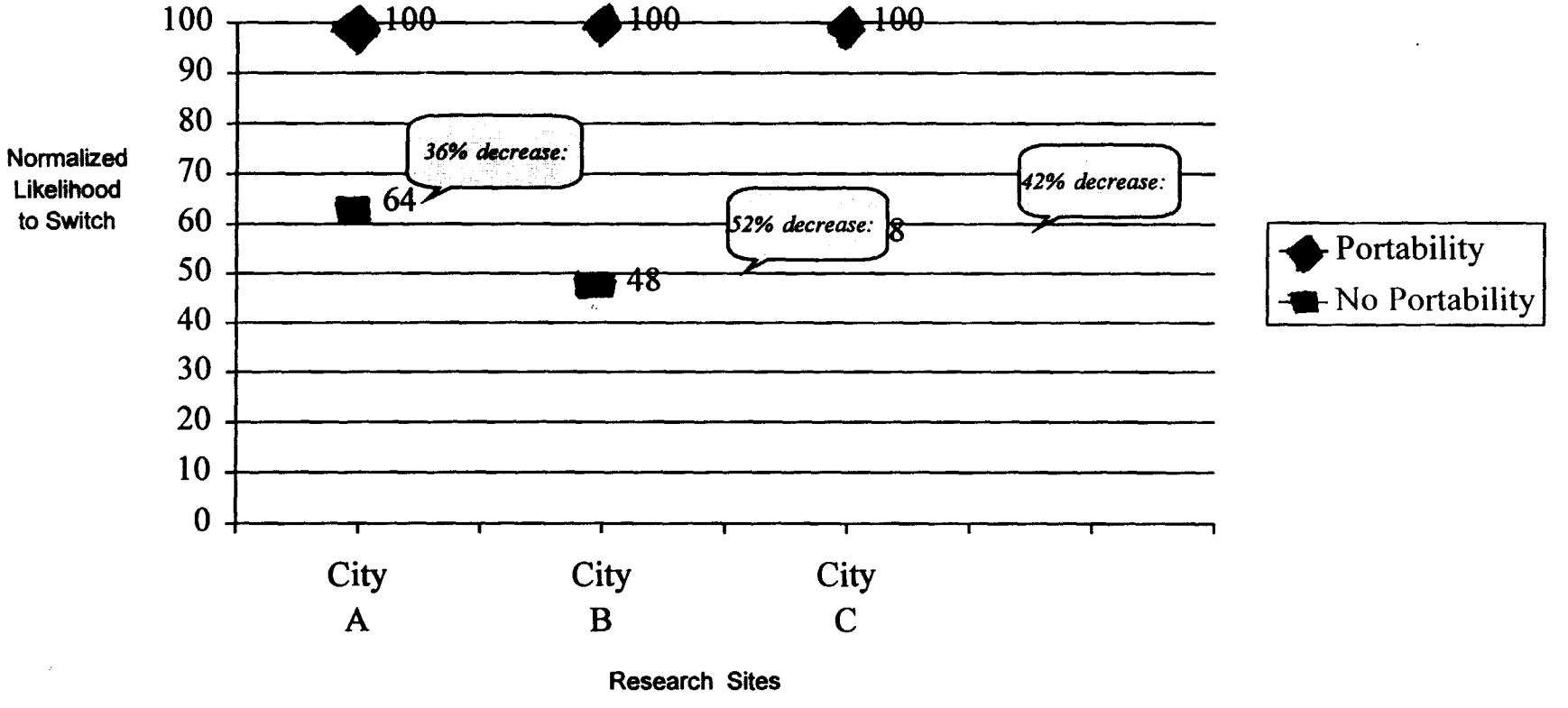
✓ *It was made clear that businesses would expect the number change to be transparent to their customers. Small businesses in particular feared a lack of credibility if this were not the case.*

✓ *Many businesses have customized phone numbers that they are not willing to give up (e.g. 232 - GOLF)*

✓ *Respondents indicated that significant financial concessions would be required in order to make them even consider a number change; some mentioned price discounts of as much as 20% - 25%*

There is a measurable difference between consumers' likelihood to switch with and without number portability across all cities

Normalized* Comparison of Customer Likelihood to Switch With and Without Number Portability Across Cities



**** See Appendix 1 for explanation of methodology used to normalize display data***

FOCUS GROUP EXCERPTS: RESIDENTIAL CUSTOMER

"...That (number change requirement) would stop me...I'm like her (another participant) about my private line. Once you've given it (private telephone number) to who you want to have it, that's it.."

✓ *"...(It would be) a major hassle. I don't want a hassle. If they have a switch back guarantee you're just going to confuse everybody."*

✓ *"...I go along with his (other participant) comment. If you change the number after you've had a number for as many years as I have, it's a major problem. Everybody all around the countryside has got my number, and I think it's a real problem.*

✓ *"...This is a real picky thing, but it makes a lot of people mad...(the thing is) that a lot of people, their phones are programmed and then you have to go through and change everybody's number..."*

(These quotes made after moderator asked group if intercept recordings would obviate the negative effects of number changes)

✓ *"...It's (number change) still inconvenient for those people that you want to have that number, the old number. There would be additional expense you'd have to incur to...especially if you're in business and you got your home number on the business card and you'd have to get new business cards made up."*

✓ *"...you know, they give a new number out with the recording. How many times have you called big companies... I've called and they say the number has been changed to so and so...It's a pain, I'd really have to think hard about it."*

FOCUS GROUP EXCERPTS ON NUMBER PORTABILITY: LARGE BUSINESS CUSTOMERS

✓ *"...That would be a kiss of death. We, particularly, deal with international customers and third world nations. No. I don't think so. There'd be no benefits... I mean, the customer is the most important person. I'm not changing numbers!"*

✓ *".. (I feel) very negative. Very negative. Well for the outside numbers, the numbers that the public knows and that are on hundreds of collateral publications and business cards, all that. We probably wouldn't do it if we had to change the main number and couldn't retain it."*

✓ *"...No, (I wouldn't change numbers). It's very annoying to customers. It gives a bad image to the public. They (public) feel there is something wrong with your company...you know, didn't pay the bill, so you got cut off from the old number...lost our lease, had to move...People are very impatient."*

(This quotes are in response to a discussion of a number change "work-around", in which businesses changed non-critical or "back-office" numbers, but retained their main number) *"...I'm trying to think of what non-critical telephone numbers aren't published all over the place. I mean if you get them one at a time or something, but I don't see any advantage in doing that; I mean that's too difficult." "...There are some DID trunks. There are some fax lines that we could change. I don't want to deal with six different vendors on this deal. I'd like to make my life simpler..."*

TIME WARNER COMMUNICATIONS

APPENDIX 1

METHODOLOGY USED TO NORMALIZE LIKELIHOOD TO SWITCH RESULTS, IN ORDER TO DETERMINE THE IMPACT OF LACK OF NUMBER PORTABILITY

METHODS USED TO NORMALIZE RESPONSES

① *Customer responses to various brand and price options were averaged for under the portability a and non portability scenarios. The percent difference between portability and non portability was calculated for each city.*

② *All responses associated with number portability were converted to 100%..*

③ *The non portability percent difference (step 1) was subtracted from the normalized portability response percent of 100% (step 2). The resulting number represents the normalized non portability response rate*

④ *Example:*	*Original Results*	*Percent Difference*	*Normalized Results*
with portability	*50%*	*-----*	*100%*
without portability	*30%*	*40%*	*60% (100% minus 40%)*

APPENDIX 2

TEXT OF QUESTIONS NUMBER PORTABILITY QUESTIONS ASKED IN TELEPHONE INTERVIEW AND FOCUS GROUP STUDIES

A. TELEPHONE INTERVIEWS

Consumers were asked the following question for a variety of brand and discount options: How likely would you be to switch to this new service? Please respond using a scale of 0% to 100%, where 0% means that you absolutely would not switch, 100% means you absolutely would switch, and 50% means you might or might not switch. Interviewers next asked the following question: You said that your likelihood of switching to this new telephone service was (repeat response obtained from above questions). Please tell me your likelihood of switching to this new telephone service if you were unable to keep you existing number using a scale of 0% to 100%, where 0% means that you absolutely would not switch, 100% means you absolutely would switch, and 50% means you might or might not switch.

B. FOCUS GROUPS

The focus group moderator addressed each group as follows, immediately after discussion of customer likelihood and willingness to switch to an alternate service provider: : Let's move on here a little bit. Nobody knows for sure, but it's possible that your current phone number may not be transferable to a line you obtain from a new provider. Like I said, nobody knows for sure, but that's a possibility. How do you feel about a situation where it's necessary to change a phone number or phone numbers in order to access an alternative service?

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APPENDIX B

ANALYSIS OF NUMBERING SCHEMES

MCImetro

As is commonly known, MCImetro is a single number Service Provider Portability approach that suggests two triggering methods: AIN and IN (800-like). With MCImetro, the Service Provider Portability database would substitute the Called Party NPA with a Carrier Portability Code (CPC) which is used for routing.

Following are advantages to using the MCImetro solution:

The MCImetro solution can be implemented in a very short time frame. The technology is here and now. It has already been successfully tested using a variety of switches in conjunction with the MCImetro service provide portability SCP database.

The MCImetro solution routes calls with a single number. There is no second number. Calls are routed using a Carrier Portability Code (CPC) which identifies a carrier, be it LEC or CLEC. The CPC is used in lieu of an NPA and are assigned out of the pool of unused NPAs. When an end office detects a call is being placed to a ported number, a query will be sent to the service provider portability database, which contains a routing number in the format of CPC-NXX-XXXX. The subscriber keeps their same seven digit NXX-XXXX number, and the MCImetro solution will use this same number along with the CPC for routing.

One of the greatest advantages to this is reduced impact on Operations Systems, which are computer systems used by telephone companies in order to provision service, monitor problems, bill, etc. Since the MCImetro solution uses one single number, the service provider portability impacts on operations systems less than solutions uing multiple numbers.

When routing calls with this single number solution, there is no need for the originating switch to swap one complete ten digit number in place of another when ported subscribers originate calls.

Although almost all Service Provider Portability solutions could be triggered by IN protocols, like 800, MCImetro CPC officially supports the use of IN triggers. The cost advantage to using IN triggers was discussed above.

MCImetro espouses the use of IN triggers for their CPC solution. The use of IN triggers does not have AIN feature interaction problems. For example, AIN standards specify that subscribers cannot activate CLASS Automatic Callback or Automatic Recall

calls to a ported number provisioned with the 3/6/10[1] trigger. The following table shows feature interactions between the IN CPC solution and CLASS features. Note that all CLASS features function correctly.

CPC SOLUTION - IN TRIGGERING			
	ported user calling non-ported user	**non-ported user calling ported user**	**ported user calling ported user**
Distinctive Ringing	OK	OK	OK
Caller ID	OK	OK	OK
Customer Originated Trace	OK	OK	OK
Selective Call Forwarding	OK	OK	OK
Selective Call Rejection	OK	OK	OK
Long Distance Call Waiting	OK	OK	OK
Anonymous Call Rejection	OK	OK	OK
	ported user activating to non-ported user	**non-ported user activating to ported user**	**ported user activating to ported user**
Automatic Recall	OK	OK	OK
Automatic Call Back	OK	OK	OK

As a comparison to the IN CPC solution, the following table shows the problem with CLASS activation toward ported numbers when using AIN.

[1] The 3/6/10 trigger is an AIN trigger that corresponds to an array of digits. For example, it can be used as a three digit trigger. In this case, when the digits of a call's NPA matches the three digits of the trigger, the trigger is said to have been detected and a query can be sent to an SCP. Likewise, the 6 digit trigger corresponds to the call's NPA-NXX, and the ten digit trigger corresponds to the entire NPA-NXX-XXXX of a call.

CPC SOLUTION - AIN TRIGGERING			
	ported user calling non-ported user	**non-ported user calling ported user**	**ported user calling ported user**
Distinctive Ringing	OK	OK	OK
Caller ID	OK	OK	OK
Customer Originated Trace	OK	OK	OK
Selective Call Forwarding	OK	OK	OK
Selective Call Rejection	OK	OK	OK
Long Distance Call Waiting	OK	OK	OK
Anonymous Call Rejection	OK	OK	OK
	ported user activating to non-ported user	**non-ported user activating to porter user**	**ported user activating to ported user**
Automatic Recall	OK	NO[1]	NO[1]
Automatic Call Back	OK	NO[1]	NO[1]

1 - Current AIN standards do not allow CLASS activations to numbers with 3/6/10 triggers.

The inability to activate CLASS features to ported numbers assigned the AIN 3/6/10 trigger is a significant issue. Bellcore standards specify that CLASS features shall not be able to activate ported numbers assigned the AIN 3/6/10 trigger. In order to remove this limitation, Bellcore standards need to be changed and vendors need to make modifications to their software.

Although not specific to the MCImetro solution, there is another important issue regarding CLASS features and service provider portability. When subscribers activate their CLASS feature, like Automatic Callback, SS7 will route ClASS messages to the subscriber's old end office, which does not allow the feature to operate normally. In order to alleviate this problem, there are two work-arounds. First, STPs can be translated with the subscriber's full ten digit telephone number (and in the case of MCImetro, the format is NPA-NXX-XXXX), instructing the messages to be routed to the correct end office. Note that STPs are not normally translated with ten digits -- a translation for each and